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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/820,033

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Kenichi Origasa

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EXAMINER

ENGLUND, TERRY LEE

ART UNIT

PAPER NUMBER

2816

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/820,033

Applicant(s)

ORIGASA ET AL.

Examiner

Terry L. Englund

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 9, and 12-19 is/are rejected.
- 7) ☒ Claim(s) 5-8, 10, 11, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment/Substitute Specification/Drawings***

The amendment, substitute specification, and drawings submitted on Nov 20, 2006 were reviewed and considered with the following results:

The Replacement Sheet of Fig. 1 overcame its "VPP" related objection described on page 1 of the previous Office Action. Therefore, that objection has been withdrawn.

The substitute specification (i.e. both the clean and the marked-up copies) has been entered. Its amended paragraphs overcame all the various objections described on pages 1-2 of the previous Office Action, wherein those objections have now been withdrawn. The other changes made to the disclosure, which were not related to any objection described by the examiner, corrected minor oversights, and/or improved word flow.

The cancellation of claim 2 rendered its objections and rejections moot.

The amended claims overcame the objections to claims 5-11, and 16-21 described on pages 3-4 of the previous Office Action. All of those claim objections have now been withdrawn. However, some amended changes created new objections, and/or some previously overlooked objections were noted when all the claims were carefully reviewed and considered. These objections are described later under the appropriate section.

The amended claims effectively overcame most of the original rejections of claims 1, and 3-21 described in the previous Office Action's pages 4-6. However, some of the previous rejections within claim 2 (now cancelled) were carried over into amended claim 1. Also, some of the amended changes either created new concerns, or did not satisfactorily address/correct the rejections described in the previous Office Action. Since no arguments or comments were

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submitted that would help to clarify those claimed limitations that had been rejected, and to minimize possible confusion with respect to the previous Office Action's numerous rejections, all the rejections of claims 1 and 3-21 under 35 U.S.C. 112 that were described in the previous Office Action have been withdrawn. New, and/or updated, rejections under 35 U.S.C. 112 are described later under the appropriate section with respect to the amended claims.

Amended claim 1 overcame the rejections of claims 1 and 13-15 under 35 U.S.C. 102(b), with respect to Fujisawa et al. Those prior art rejections have now been withdrawn because the reference does not clearly show or disclose a level shifter circuit outputting the timing signal of the first voltage as now recited within claim 1.

### ***Claim Objections***

Claims 5-11 and 20-21 are objected to because of the following informalities: Both occurrences of "the voltage" cited on lines 16-17 of claim 5 should be changed to --the boosted voltage-- to more clearly relate back to "a boosted voltage for use in a functional block" cited on lines 3-4 of the same claim. After reviewing claim 10 and the applicants' Fig. 6, it is believed "said second standard voltage" should be --said first standard voltage--. For example, one of ordinary skill in the art would understand that first standard voltage VPPMVT of Fig. 6 is approximately a threshold lower than boosted voltage VPP due to diode connected transistor 600. [Note: The examiner had inadvertently overlooked this concern previously, and related claim 11 cites "said first standard voltage" on line 5.] Dependent claims carry over any objection(s) from any claim(s) upon which they depend. Appropriate correction is required.

Claim 8 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. The applicants are required to

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cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. It is not clear how claim 6's "the drain of said transistor is connected with a power supply line for providing said second voltage" is further limited by claim 8's "the drain of said transistor is connected to a power supply line of said second voltage", or is claim 8 meant to imply another, or second "power supply line of said second voltage" exists?

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-4, 9, and 12-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. Since claim 1, line 5 had "said functional block" changed to "a functional block", how does this block now relate to "a functional block" already cited on line 2 of claim 1? For example, do they refer to two distinct blocks, or to the same block? It is not clear what "timing signal of said second voltage" (line 11) and "timing signal of said first voltage" (line 12) mean in claim 1. A signal can be constant, variable, or when describing logic related signals, the signal transitions between high and low (e.g. voltage levels). For example, are these timing signals constantly at their corresponding voltage, periodically at the voltage, or centered on the voltage? Since claim 1 now cites "a detector circuit and a voltage booster circuit" on lines 6-7, how do they relate to "a detector circuit and a voltage booster circuit" cited within claim 3, line 2? If claim 6's "drain of the transistor is connected with a power supply line for providing said second voltage", how can the drain also be connected to "a line at said ground

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voltage” as cited in claim 9? Is this meant to imply that the “second voltage” is also the “ground voltage”? Since claim 1 now cites “a charge pump circuit” on line 9, how does “a charge pump circuit” of claim 12 (line 2) relate to it? For example, are they two distinct circuits, or referring to the same one? Claim 16 depends on cancelled claim 2. It is not clear what “timing signal at a level of said second voltage” (line 11) and “timing signal at a level of said first voltage” (line 12) mean in claim 17. For example, are these signals constantly at their corresponding level, periodically at the level, or centered on that level?

Claim 1 recites the limitation "said voltage booster circuit" in line 3. There is insufficient antecedent basis for this limitation in the claim. Although “a voltage booster circuit” is cited on lines 6-7 of the same claim, it is not clear if this is the same circuit being referred to by the line 3 limitation. For example, is line 3’s “voltage booster circuit” meant to refer to the “voltage booster power supply circuit” (e.g. see line 1), or to the “voltage booster circuit” also cited on each of lines 7 and 8?

Similar to claim 1 above, claim 17 recites the limitation "said voltage booster circuit" in line 3. There is insufficient antecedent basis for this limitation in the claim. Although “a voltage booster circuit” is also cited on lines 6-7 of the same claim, it is not clear if this is the same circuit being referred to by the line 3 limitation. For example, is line 3’s “voltage booster circuit” meant to refer to the “voltage booster power supply circuit” (e.g. see line 1), or to the “voltage booster circuit” also cited on each of lines 7 and 8?

Dependent claims carry over any rejection(s) from any claim(s) upon which they depend.

No claim is allowable as presently written.

Claim 2 has been cancelled.

*Allowable Subject Matter*

However, claims 5-8, 10-11, and 20-21 are only objected to as described above. There is presently no strong motivation to modify or combine any prior art reference(s) to ensure a voltage booster power supply circuit, supplied with first/second voltages and a ground voltage, also comprises the detector circuit's standard voltage generator circuit providing a second standard voltage by decreasing the "first voltage", and the detector circuit has a voltage step-down circuit as recited within claim 5, upon which claims 608, 10-11, and 20-21 depend.

Also, claims 1 and 17 would be allowable if satisfactorily rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. There is presently no strong motivation to modify or combine any prior art reference(s) to ensure the voltage booster power supply circuit comprises a timing generator circuit, level shifter circuit, and charge pump circuit as recited within claims 1 and 17, wherein the level shifter outputs the timing signal with a high level, corresponding to the first voltage, to the charge pump circuit.

Claims 3-4, 9, 12-15, and 18-19 would also be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Although some of these claims have their own specific rejection under 35 U.S.C. 112, most are rejected for carrying over the rejection(s) from their corresponding independent claim 1 or 17.

**THIS ACTION IS MADE FINAL.** The applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication, or previous communications, from the examiner should be directed to Terry L. Englund whose telephone number is (571) 272-1743.

The examiner can normally be reached Monday-Friday from 7 AM to 3 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (571) 272-1740.

The new central official fax number is (571) 273-8300.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1562.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Terry L. Englund

16 February 2007

  
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